**Sound and Light:**

**Essential Vocabulary**

**Please define and illustrate in color the following terms:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **2** | **Written Definition** | | **Use in a Sentence** | **Illustration**  **(Colored)** |
| 1. **Sound (p.498)** | **Vibrating objects that travel in waves. Produced by an objects which vibrates.** | |  |  |
| 1. **Amplitude (p.477)** | **Energy carried by a wave.**  **The height of a sound wave.** | |  | **transvers_waves_001** |
| 1. **Decibel (p.505)** | **Intensity of sound described using a measure scale.**  **Measure of loudness.** | |  | **MCHM00050_0000[1]** |
| 1. **Frequency (p.480)** | **The number of wavelengths that pass a fixed point each second.** | |  | **wave1** |
| 1. **Longitudinal Wave (p.475)** | **Matter in a medium which moves back and forth in the same direction.**  **Examples... slinky, sound wave** | |  | **compression wave** |
| 1. **Rarefactions (p.475)** | **The parts where the coils are spread out** | |  | **long_waves** |
| 1. **Compressions (p. 475)** | **The parts where the coils are close together** | |  | **long_waves** |
| 1. **Wavelength (p.479)** | **The distance between crest to crest or trough to trough.** | |  | **transvers_waves_001** |
| 1. **Medium**   **(p. 473)** | **The material through which a wave travels.** | |  |  |
| 1. **Pitch (p.506)** | **A description of how high or low the sound seems to be** | |  |  |
| 1. **Transverse Waves (p.328)** | **Matter in the medium moves back and forth at right angles.**  **Example…water wave** | |  | **transvers_waves_001** |
| 1. **Concave lens**   **(p. 578)** | **A piece of glass that is thinner in the center than at the edges** | |  | [http://t3.gstatic.com/images?q=tbn:wIfTdJlI4XVqzM:http://www.play-hookey.com/optics/images/concave_lens.gif](http://images.google.com/imgres?imgurl=http://www.play-hookey.com/optics/images/concave_lens.gif&imgrefurl=http://www.play-hookey.com/optics/lens_intro.html&usg=__s89S46Dw4sa5G9sxDcT8nNktfOk=&h=150&w=150&sz=1&hl=en&start=4&itbs=1&tbnid=wIfTdJlI4XVqzM:&tbnh=96&tbnw=96&prev=/images%3Fq%3Dconcave%2Blense%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Concave mirror**   **(p. 573)** | **A mirror with a surface that curves inward and produces a virtual or real image.** | |  | [http://t3.gstatic.com/images?q=tbn:m22_u9CpeuCPnM:http://www.antonine-education.co.uk/Physics_A2/options/Module_5A/Topic_2/Concave.gif](http://images.google.com/imgres?imgurl=http://www.antonine-education.co.uk/Physics_A2/options/Module_5A/Topic_2/Concave.gif&imgrefurl=http://www.antonine-education.co.uk/Physics_A2/options/Module_5A/Topic_2/topic_2_the_reflecting_telescope.htm&usg=__f94iCrRsKQSJ0I9x9AqlYdDfiaU=&h=350&w=456&sz=4&hl=en&start=7&itbs=1&tbnid=m22_u9CpeuCPnM:&tbnh=98&tbnw=128&prev=/images%3Fq%3Dconcave%2Bmirror%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Convex lens**   **(p. 578)** | **A piece of glass that is thicker in the center than at the edges** | |  | [ConvexLens_001](http://images.google.com/imgres?imgurl=http://baldragon.ea.dundeecity.sch.uk/Departments/Physics/images/ConvexLens_001.png&imgrefurl=http://baldragon.ea.dundeecity.sch.uk/Departments/Physics/Propertiesoflightweb_001.htm&usg=__s1ESBI2DWLY5DLpxyWMPUllNZcI=&h=323&w=299&sz=10&hl=en&start=4&itbs=1&tbnid=TRKP5UBtHTqeoM:&tbnh=118&tbnw=109&prev=/images%3Fq%3Dconvex%2Blens%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Convex mirror**   **(p. 578)** | **A mirror with a surface that curves outward and produces a virtual image right side up** | |  | [http://t3.gstatic.com/images?q=tbn:B_mnRonYq5uD_M:http://image.tutorvista.com/content/light-reflection/convex-mirror.gif](http://images.google.com/imgres?imgurl=http://image.tutorvista.com/content/light-reflection/convex-mirror.gif&imgrefurl=http://www.tutorvista.com/content/physics/physics-ii/light-reflection/concave-mirror-uses.php&usg=__Hzvwit-6i0EIxJuy7aqxbEPlEyc=&h=290&w=384&sz=5&hl=en&start=5&itbs=1&tbnid=B_mnRonYq5uD_M:&tbnh=93&tbnw=123&prev=/images%3Fq%3Dconvex%2Bmirror%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Opaque**   **(p. 570)** | **A material that reflects or absorbs all light – light that can’t pass through it.** | |  | [http://t2.gstatic.com/images?q=tbn:Jp9O8uJ3CWCCeM:http://media.tiscali.co.uk/images/feeds/hutchinson/ency/c02371.jpg](http://images.google.com/imgres?imgurl=http://media.tiscali.co.uk/images/feeds/hutchinson/ency/c02371.jpg&imgrefurl=http://www.talktalk.co.uk/reference/encyclopaedia/hutchinson/m0030376.html&usg=__GAGPPedepPpG1Bf5eXYJ7edIJ-A=&h=350&w=517&sz=12&hl=en&start=30&itbs=1&tbnid=Jp9O8uJ3CWCCeM:&tbnh=89&tbnw=131&prev=/images%3Fq%3Dopaque%2Bobject%26start%3D20%26hl%3Den%26safe%3Dactive%26sa%3DN%26gbv%3D2%26ndsp%3D20%26tbs%3Disch:1) |
| 1. **Photon**   **(p. 537)** | **A tiny particle of light energy** | |  | [http://t3.gstatic.com/images?q=tbn:CQA_Fl68jKDlCM:http://www.courseworld.com/sci10/labs/radiometer.gif](http://images.google.com/imgres?imgurl=http://www.courseworld.com/sci10/labs/radiometer.gif&imgrefurl=http://www.courseworld.com/sci10/labs/radiometer.html&usg=__AvfKHVRfyARCleezo4DIvTTJqWc=&h=304&w=264&sz=4&hl=en&start=4&itbs=1&tbnid=CQA_Fl68jKDlCM:&tbnh=116&tbnw=101&prev=/images%3Fq%3Dradiometer%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Plane mirror**   **(p. 572)** | **A flat mirror image that is right side up and the same size** | |  | [http://t0.gstatic.com/images?q=tbn:_bb0o1G2fE4l7M:http://www.gcsescience.com/Reflection-Light-Ray.gif](http://images.google.com/imgres?imgurl=http://www.gcsescience.com/Reflection-Light-Ray.gif&imgrefurl=http://www.gcsescience.com/pwav18.htm&usg=__ursTvOCUhWvU5tXtzH9lO-BGSRs=&h=195&w=451&sz=5&hl=en&start=11&itbs=1&tbnid=_bb0o1G2fE4l7M:&tbnh=55&tbnw=127&prev=/images%3Fq%3Dplane%2Bmirror%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Reflection**   **(p. 482)** | **When an object hits a surface and can’t bounce back** | |  | [http://t1.gstatic.com/images?q=tbn:wAllRKc1Hj8dRM:http://www.objectsandpixels.com/img/blog/sketchbook_reflection.jpg](http://images.google.com/imgres?imgurl=http://www.objectsandpixels.com/img/blog/sketchbook_reflection.jpg&imgrefurl=http://www.objectsandpixels.com/indy/blog/351%3Bjsessionid%3D5EB145693BA736CF7E7423689C0CB920&usg=__lZ3eMSFerGdHYksRogmBpKZwl0Q=&h=320&w=420&sz=49&hl=en&start=93&itbs=1&tbnid=wAllRKc1Hj8dRM:&tbnh=95&tbnw=125&prev=/images%3Fq%3Dreflection%26start%3D80%26hl%3Den%26safe%3Dactive%26sa%3DN%26gbv%3D2%26ndsp%3D20%26tbs%3Disch:1) |
| 1. **Refraction**   **(p. 483)** | **The bending of waves due to a change in speed** | |  | [http://t2.gstatic.com/images?q=tbn:GESur2pd5JA5JM:http://www.datasync.com/~wizard/Lasers/Refraction348.jpg](http://images.google.com/imgres?imgurl=http://www.datasync.com/~wizard/Lasers/Refraction348.jpg&imgrefurl=http://www.datasync.com/~wizard/Lasers/Lasers.html&usg=__BByP9mzhOu1B41kS5gWWi2KGQrc=&h=439&w=456&sz=34&hl=en&start=5&itbs=1&tbnid=GESur2pd5JA5JM:&tbnh=123&tbnw=128&prev=/images%3Fq%3Drefraction%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Translucent**   **(p. 570)** | **Materials that allow some light to pass through** | |  | [http://t1.gstatic.com/images?q=tbn:NsLNjsjLljmkvM:http://upload.ecvv.com/upload/Product/200801/C200791121718215130_Translucent_Stone_Glass_Panel.jpg](http://images.google.com/imgres?imgurl=http://upload.ecvv.com/upload/Product/200801/C200791121718215130_Translucent_Stone_Glass_Panel.jpg&imgrefurl=http://www.ecvv.com/product/1007896.html&usg=__eZELZIix3MDBRx6XXsRQlTbQMrU=&h=450&w=600&sz=17&hl=en&start=5&itbs=1&tbnid=NsLNjsjLljmkvM:&tbnh=101&tbnw=135&prev=/images%3Fq%3Dtranslucent%26hl%3Den%26safe%3Dactive%26gbv%3D2%26tbs%3Disch:1) |
| 1. **Transparent**   **(p. 570)** | **Materials that allow light to pass right through** | |  | [http://t2.gstatic.com/images?q=tbn:b42W7MwOIAoUZM:http://phasetwo.files.wordpress.com/2007/09/9-3-07-transparent_toaster.jpg](http://images.google.com/imgres?imgurl=http://phasetwo.files.wordpress.com/2007/09/9-3-07-transparent_toaster.jpg&imgrefurl=http://phasetwo.wordpress.com/2007/09/03/transparent-toaster-concept/&usg=__0-QYSQhre8-Vba2j-lU-oxemsbA=&h=410&w=404&sz=64&hl=en&start=44&itbs=1&tbnid=b42W7MwOIAoUZM:&tbnh=125&tbnw=123&prev=/images%3Fq%3Dtransparent%26start%3D40%26hl%3Den%26safe%3Dactive%26sa%3DN%26gbv%3D2%26ndsp%3D20%26tbs%3Disch:1) |
| 1. **Light (p. 544)** | **Visible electromagnetic radiation.**  **To see an object it must reflect light and color.** | |  | **MCj04352360000[1]** |
| 1. **Electromagnetic Waves (p.390)** | | **Made by vibrating electric charges. Can travel through space . Transfers energy between vibrating electric and magnetic fields.** |  | **electromagnectic wave** |
| 1. **Electromagnetic Spectrum (p.539)** | | **Electromagnetic waves with a variety of frequencies and wavelengths.**  **Range of all electromagnetic radiation.** |  | **electromagnetic-spectrum** |